BY ORDER OF THE COMMANDER
AIR MOBILITY COMMAND

AIR MOBILITY COMMAND PAMPHLET 24-2, VOLUME 3

1 DECEMBER 2001

Transportation

CIVIL RESERVE AIR FLEET LOAD PLANNING GUIDE MCDONNELL DOUGLAS DC-10

NOTICE: This publication is available digitally on the AFDPO WWW site at: **http://afpubs.hq.af.mil.**

OPR: HQ AMC/DOF (MSgt Gary Langford)
Certified by: HQ AMC/DOF (Col Halbert)
Supersedes AMCP 24-2, Chapter 6, 1 May 2001
Pages: 30
Distribution: F

This volume implements AFPD 24-2, Preparation and Movement of Air Force Materiel, and provides information needed to load plan a portion of the Civil Reserve Air Fleet (CRAF). Aircraft discussed in this volume is the wide body McDonnell Douglas DC-10. Provisions of this volume applies to Active Duty, National Guard, Military Reserve Units and other government agencies while utilizing commercial aircraft during contingencies.

This volume of AMCP 24-2 is intended for use as a load planning guide. Equipment listed is dimensionally compatible with all McDonnell Douglas DC-10 aircraft and cargo areas discussed. Final approval of the procedures in this publication, however, ultimately rests with the individual contractor providing airlift services to the DoD. When new or additional information is received from the manufacturer, it will be provided as a change to this publication.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

The information contained herein is identical to the information in the previous pamphlet broken down into a more manageable file size. No data has changed. Users of this volume should print volume one which deals with the Administration, Policies, Specialized Loading Support Equipment, and Passenger, and Baggage Loading.

1. General Description. The McDonnell Douglas DC-10 is a wide-body jet flown by domestic and foreign airlines in both passenger and cargo configurations. The DC-10 comes in three different variants or series and within these series are different configurations of passenger and cargo. These three series are the "dash" 10, 30 and 40 aircraft, which are passenger carrying and the "CF" (convertible/freight) and the "F" Freighter series. Please note that, although the CF model can be dual configured with a combination of cargo in the front and passengers aft, for the purpose of this text the CF model (when used) will be in the all cargo configuration only. When in the cargo configuration, the passenger interior kit (ceiling, overhead bins, etc.) will not be removed from the aircraft and reduces the interior height to 88 inches. See **Figure 11.** and **Figure 12.** for further details. The DC-10 can carry up to 380 passengers or 176,000 pounds of cargo. However actual passenger and cargo capabilities vary by aircraft series and configuration. The DC-10-30F has been permanently converted to the freighter version, which has an increased payload and greater interior dimensions on the main deck.

Figure 1. McDonnell Douglas DC-10.

2. Passenger Seating. The actual number of seats available on the DC-10 aircraft varies depending on the series of aircraft and carrier spacing of seats. In **Table 2.** the number of seats available is given, as well as the number of seats HQ AMC/DOY uses when contracting DC-10s for channel or exercise missions. **Figure 6.** gives typical seating configurations that may be seen on CRAF DC-10 aircraft. Historically, 30-series DC-10s are commonly used for exercises because of greater payload-range performance and are figured at 250 seats. ***EXCEPTION:*** 380 seats may be available on some DC-10s; however, loading over 354 troops might exceed the guaranteed allowable cabin load (GACL) and reduce aircraft range. In cases where troop weights and baggage weights are less than those outlined in AMCP 24-2, Volume I paragraph 4.2., these seat-planning figures may be increased. The carrier is the final authority for any such increases above the figures listed.

3. Maximum Payload. The maximum payload is computed without regard to cargo density and is limited only by aircraft structural limitations or fuel requirements for a specific range. The maximum structural payload for each series DC-10 can be found in **Table 2.** while range payload information is in **Attachment 1** and **Attachment 2**.

4. Cargo Door Dimensions and Cargo Restrictions. DC-10 cargo-capable aircraft have a side door located on the forward left side of the aircraft (**Figure 3.** and **Figure 4.**). The door is approximately 16 feet above ground level and provides a clear opening of 140 inches (width) x 102 inches (height) for main deck cargo loading (**Figure 10.**). The maximum height of cargo is dependent on interior cabin height, which varies with model aircraft and the position of the cargo on the main deck. Refer to **Figure 13.** (DC-10 pallet profiles) to determine maximum heights of cargo based on pallet positions.

5. Main Deck Pallet Configuration. Maximum load on the main cargo floor is limited to 75 pounds per square foot: therefore, all cargo on the main deck must be palletized, positioned on a pallet, or shored with a subfloor. Normally, the pallet subfloor consists of standard 463L pallets; shoring consist of wood at least 2 inches thick, or two layers of ¾- inch plywood. The DC-10 freighters have a thirty 463L pallet configuration (**Figure 7.**). All main deck pallets must be profiled according to **Figure 13.**

6. Main Deck Maximum Pallet Weights. Maximum pallet weights vary by location within the aircraft. Refer to **Figure 7.** for weight restriction by pallet position. Ensure that pallet weights, cargo weight, and pallet netting are within maximum weight limitations and also within combined pallet limitations (**Figure 7.** (second note) and **Figure 8.** and **Figure 9.**).

7. Lower Lobe Compartments. The DC-10 has three lower lobe compartments: Forward lower lobe (FLL), center lower lobe (CLL), and aft bulk compartment (ABC). The length of each compartment varies depending on type and model. **Table 1.** through **Table 7.** provide additional information on package size limitations.

7.1. Front Lower Lobe. The FLL of the DC-10 has a solid floor. With an upper galley configuration, 3,045 cubic feet are available. When the galley is reconfigured and moved down stairs to the Front Lower Lobe, available space is reduced, only 1,300 cubic feet is available. Most upper galley models have the large 104-inch by 66.inch cargo door. Some aircraft have 463L pallet capability. For all other aircraft, the preferred method is to load bulk cargo by hand. The location of the galley and the size of the FLL door varies among carriers and aircraft types. Check with carrier representatives on aircraft configuration.

7.2. Center Lower Lobe. The CLL has a solid floor. Most DC-10s have the standard 1550 cubic feet capability and a 70- by 66.inch door. Some models have an extended CLL of 1935 cubic feet, but retain the 70- by 66.inch door.

7.3. Aft Bulk Compartment. The ABC has a solid floor. Most DC-10s have the standard 805 cubic foot capability and the 44- by 48-inch door. This door is located on the left side of aircraft. If the CLL is extended, the ABC is 510 cubic feet, with a 30- by 36.inch door. Only a curtain as opposed to the wall found in the standard configuration would then separate the ABC and CLL. This compartment is normally used by the carrier and not available for AMC cargo.

8. Wheeled Vehicle Loads. For general planning, plan single-pallet bulk only cargo for the DC-10 aircraft. The transport of wheeled vehicles should only be considered as a result of carrier-user coordination.

9. Loading Sequence. For passenger DC-10s, start loading baggage in the ABC (when authorized by the carrier), then the CLL, and finally the aft section of the FLL. For cargo aircraft, load bulk cargo designated for the FLL, then pallet position 1L and 1R on the main deck. This ensures there is always positive weight in the front of the aircraft. Finally, load the remainder of the main deck from the aft section forward and the CLL and ABC. The sequence followed in this manner will maintain a forward aircraft center of balance, therefore prevent tipping the jet.

10. Placement of Hazardous Materials. Pallets containing hazardous materials identified as "cargo only aircraft" and "dagger" type cargo must be planned for pallet positions 1L, 1R, 2L, 3L, and 4L. Pallets placed in pallet positions 1L and 1R will have an 18-inch aisle-way along the 108-inch (longitudinally loaded) side. Aisle-way will face outboard.

11. Loading Times and Crews. (See AMCP 24-2 Volume I, paragraph 2.7. for contract aircraft loading times.) Typical loading times vary greatly, depending on the experience level of the crew in loading a DC-10. In general, the following can be used as a guideline, based on a 7-member crew working the lower lobes and a 7-member crew working the main deck.

Reconfigure main deck pallet locks (as required)	+ 55 to 1 + 05
Install main deck subfloor	+ 40 to 1 + 05
Load main deck	1 + 30 to 2 + 30
Hand load lower lobe baggage**	+ 50 TO 1 + 30

**Lower lobe normally is loaded concurrently with main deck.

12. General Rules. Some of the rules have been discussed in previous paragraphs; however, this list is given as a guide:

12.1. All cargo must be loaded over and placed on a subfloor, preferably military pallets.

12.2. Wooden shoring at least 2 inches thick may be used in between pallets or as a subfloor.

12.3. ACL includes pallet and tie-down weights figured at 355 pounds per pallet (290 pounds per pallet,65 pounds for top and side nets, or other restraint equipment.

12.4. A wide-body elevator loader is required for main deck cargo on/off loads.

12.5. All cargo loaded on 463L pallets is limited to 250 pounds per square inch and is also restricted to the maximum pallet weight according to figure 6.7, figure 6.8 and figure 6.9.

12.6. Determining weight limits is a three-step process:

12.6.1. Ensure individual pallet weights are within limits.

12.6.2. Ensure combined weight of lateral pallets and lower lobe cargo is within the pallet position zone limit and does not exceed total allowable weight.

12.6.3. Ensure zone limits are not exceeded (figures 6.8. and 6.9.).

Figure 2. DC-10 General Description.

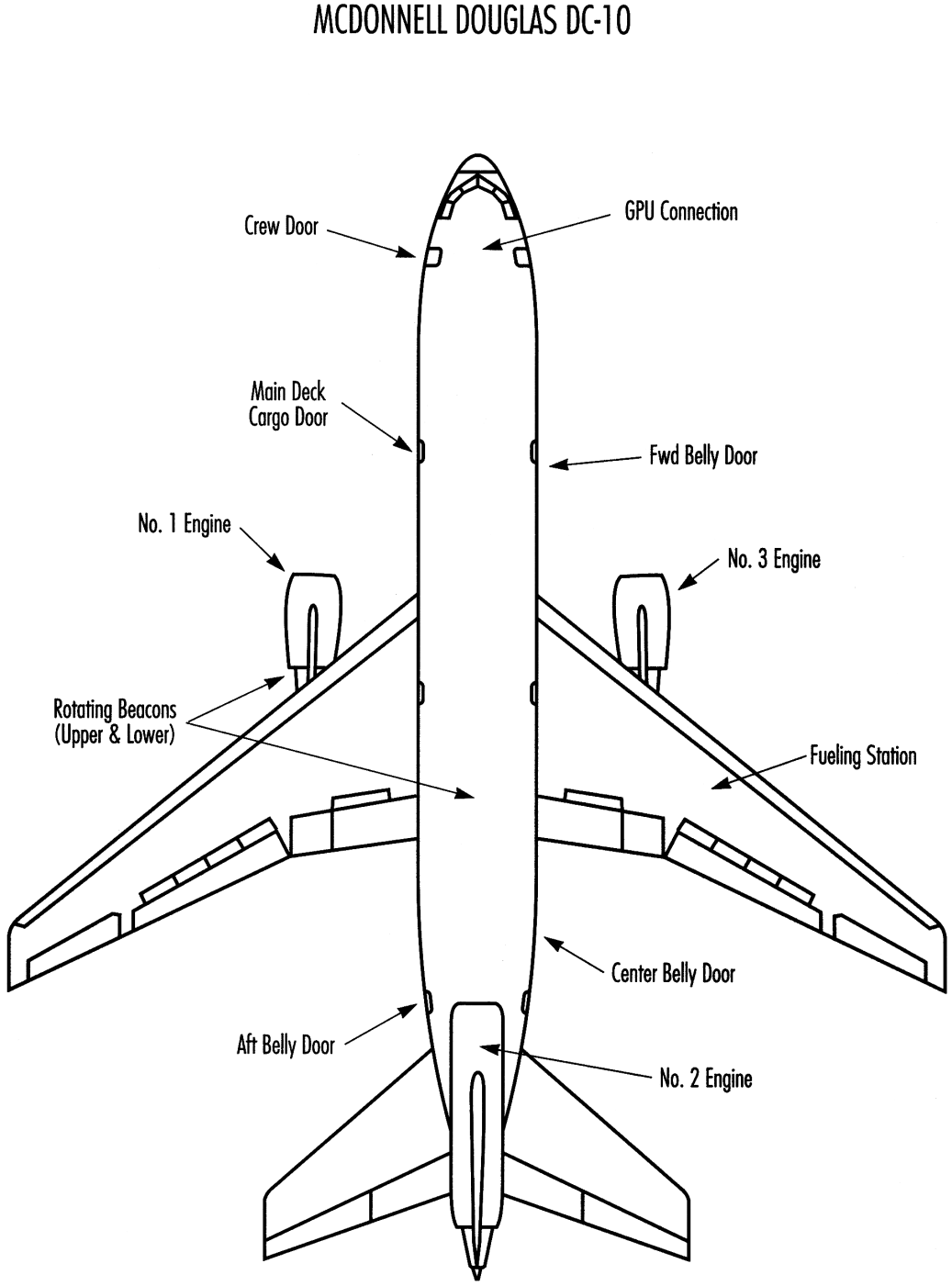


Figure 3. DC-10 Dimensions.

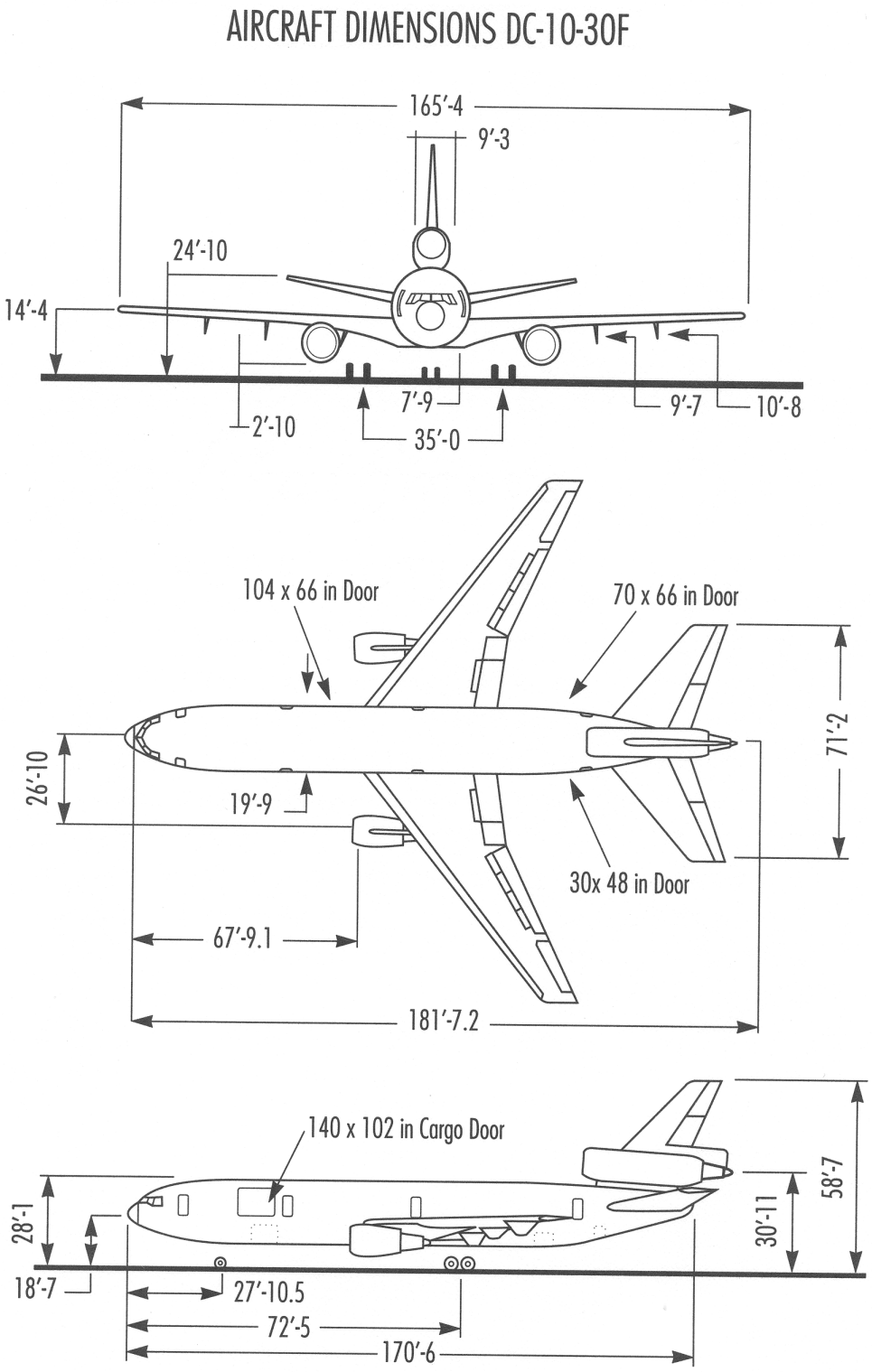
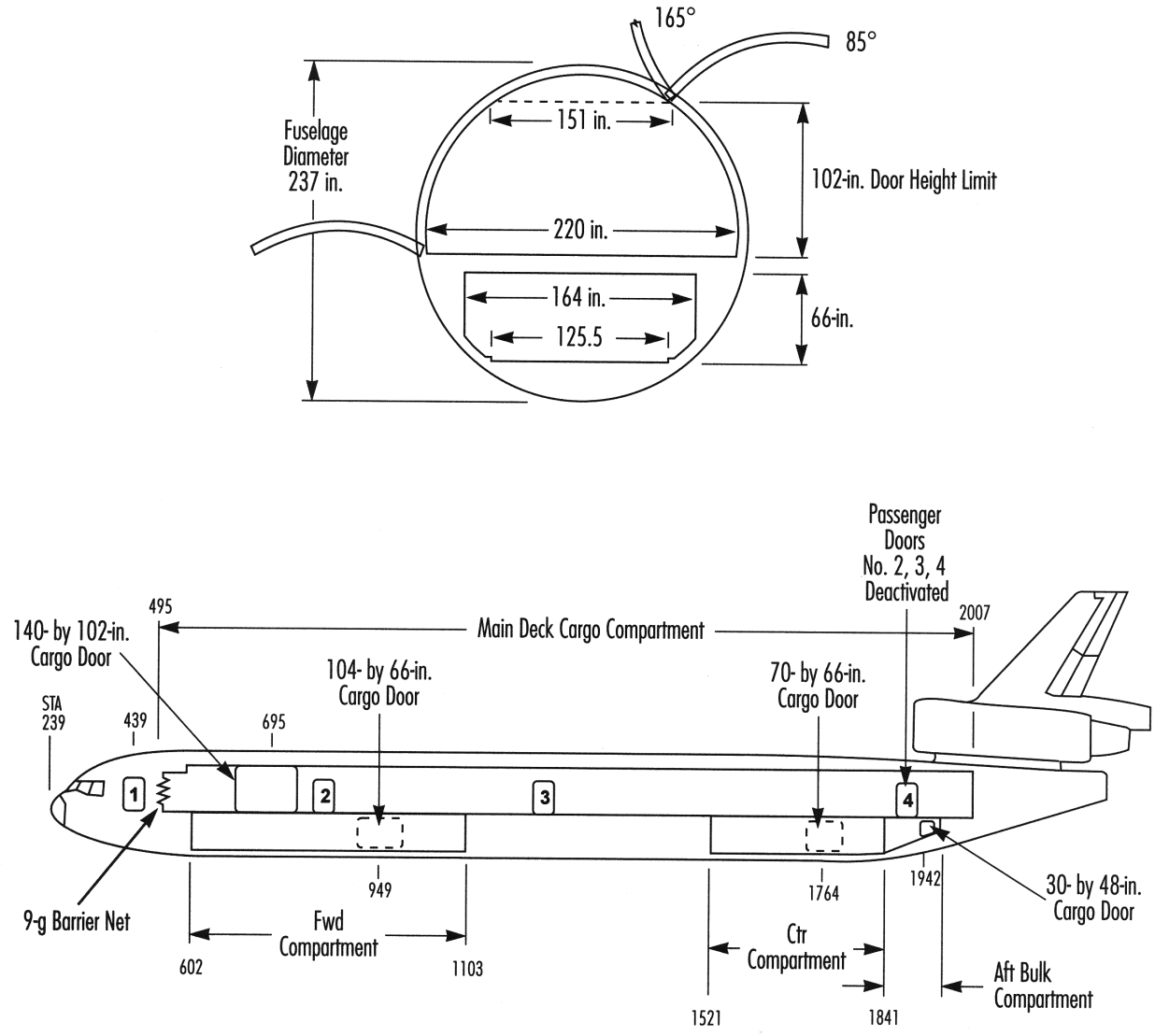


Figure 4. DC-10 Fuselage Description, Cross and Lateral.



DC-10 Freighter Model. Passenger versions are the same.

Table 1. DC-10 General Information, Dimensions.

Aircraft	A	B	C	D	E	Turn Radius /1	U-Turn /2	Min Rwy. Width	Min Taxi Width	Fuel Gal/ Hr. 3	Block Speed /3
DC-10-10	182’3”	58’7”	155’4”	33”	41’2”	122’2”	144’4”	150’	75’	2985	450
DC-10-10CF	182’3”	58’7”	155’4”	33”	41’2”	122’2”	144’4”	150’	75’	2985	455
DC-10-30	181’7”	58’7”	165’4”	34”	41’2”	130’6”	149’6”	150’	75’	2985	455
DC-10-10F	181’7”	58’7”	165’4”	34”	41’2”	130’6”	149’6”	150’	75’	2985	460
DC-10-40	182’3”	58’7”	165’4”	34”	41’2”	130’6”	149’6”	150’	75’	2985	455

NOTES:

[1] From pivot point of aircraft to most distant point on wing fuselage.

[2] Based on area needed for wheels to remain on runway to complete a 180**o** turn.

[3] Based on a 4,000 mile trip.

Figure 5. DC-10 General Information.

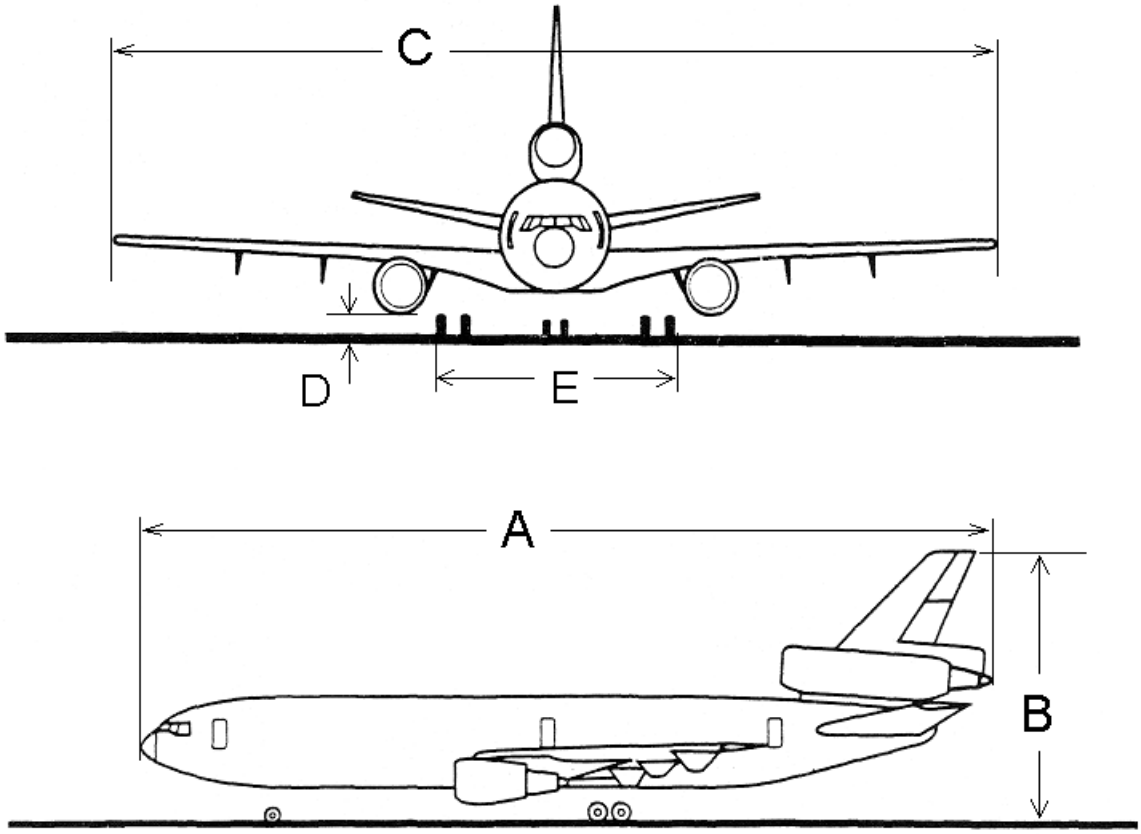


Table 2. DC-10 General Information, Weights and Capacities.

Aircraft	**Max T/O**	**Max Land**	**Zero Fuel**	**Operating**	**Max Payload /4**	**Cargo/ PAX Contract ACL**	**Seats /5**	**Mil 88x 108**
DC-10-10	440,000	363,500	335,000	247,300	87,700	---- /354	250-380	----
DC-10-10CF	440,000	363,500	335,000	225,150	117,700	----	----	30
DC-10-30	572,000	411,000	368,000	271,000	97,000	---- /354	250-380	----
DC-10-10F	572,000	421,000	401,000	243,000	158,000	75.0/ ----	----	30
DC-10-40	572,000	411,000	368,000	272,900	95,000	---- /354	250-380	----
DC-10-30F	580,000	421,000	401,000	243,400	88,000	75.0 /----	----	30

NOTES:

[4] Refer to paragraph **3.** for further clarification.

[5] Refer to paragraph **2.** for further clarification.

Figure 6. DC-10 Typical Seating Configurations.

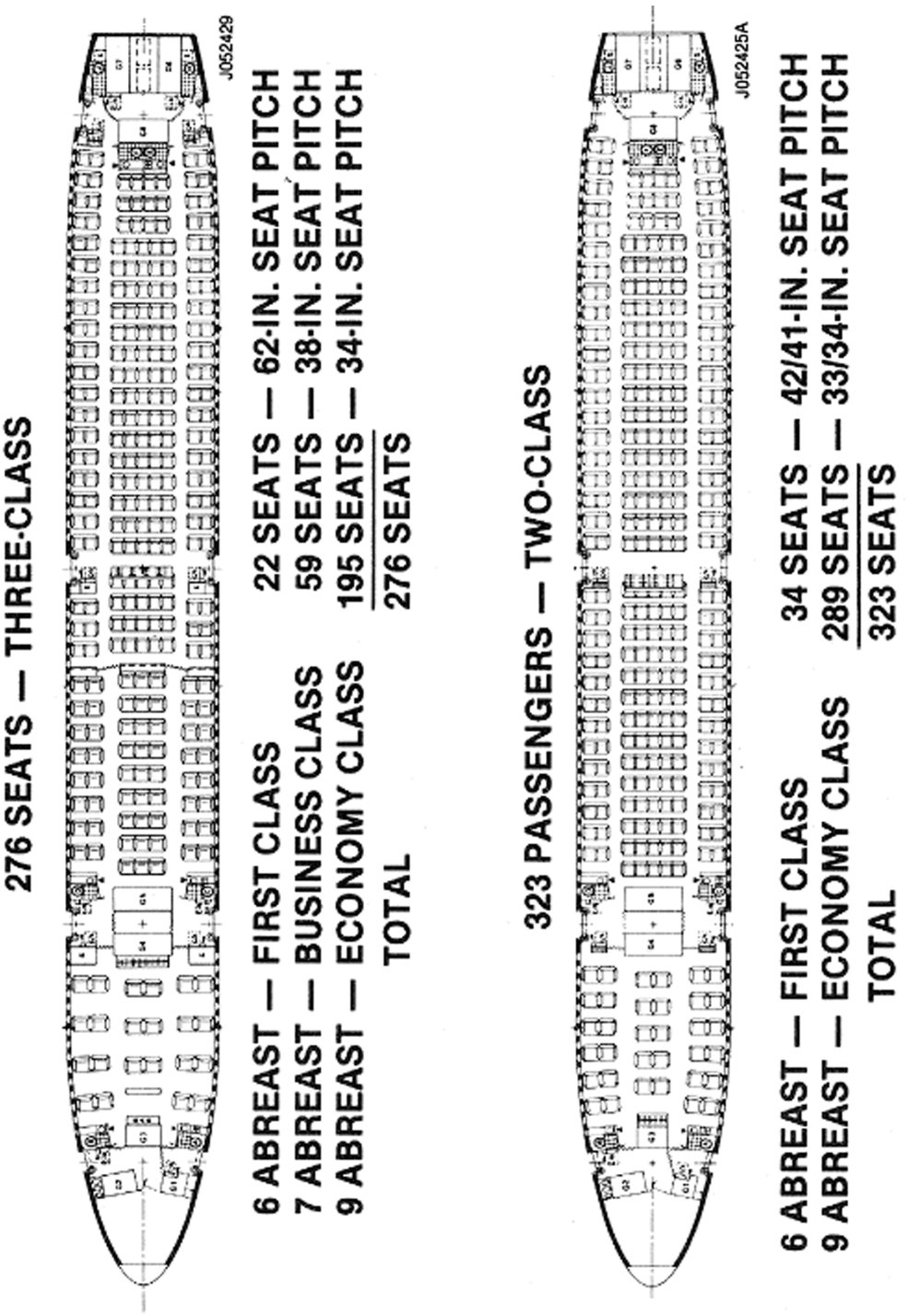


Figure 7. DC-10-30F (Freighter) Floor Plans 30 Pallets, ea. 88' x 108" (463L).

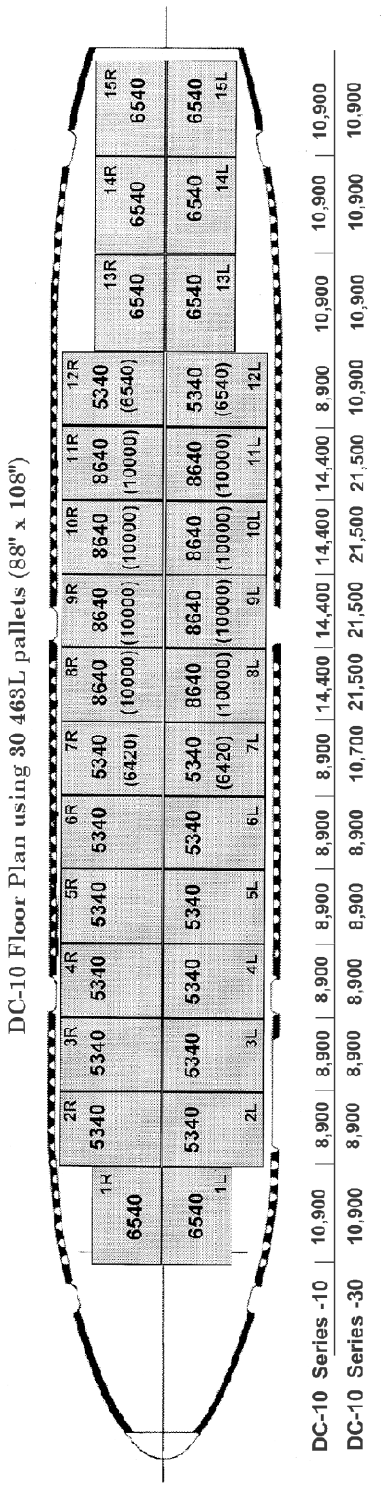
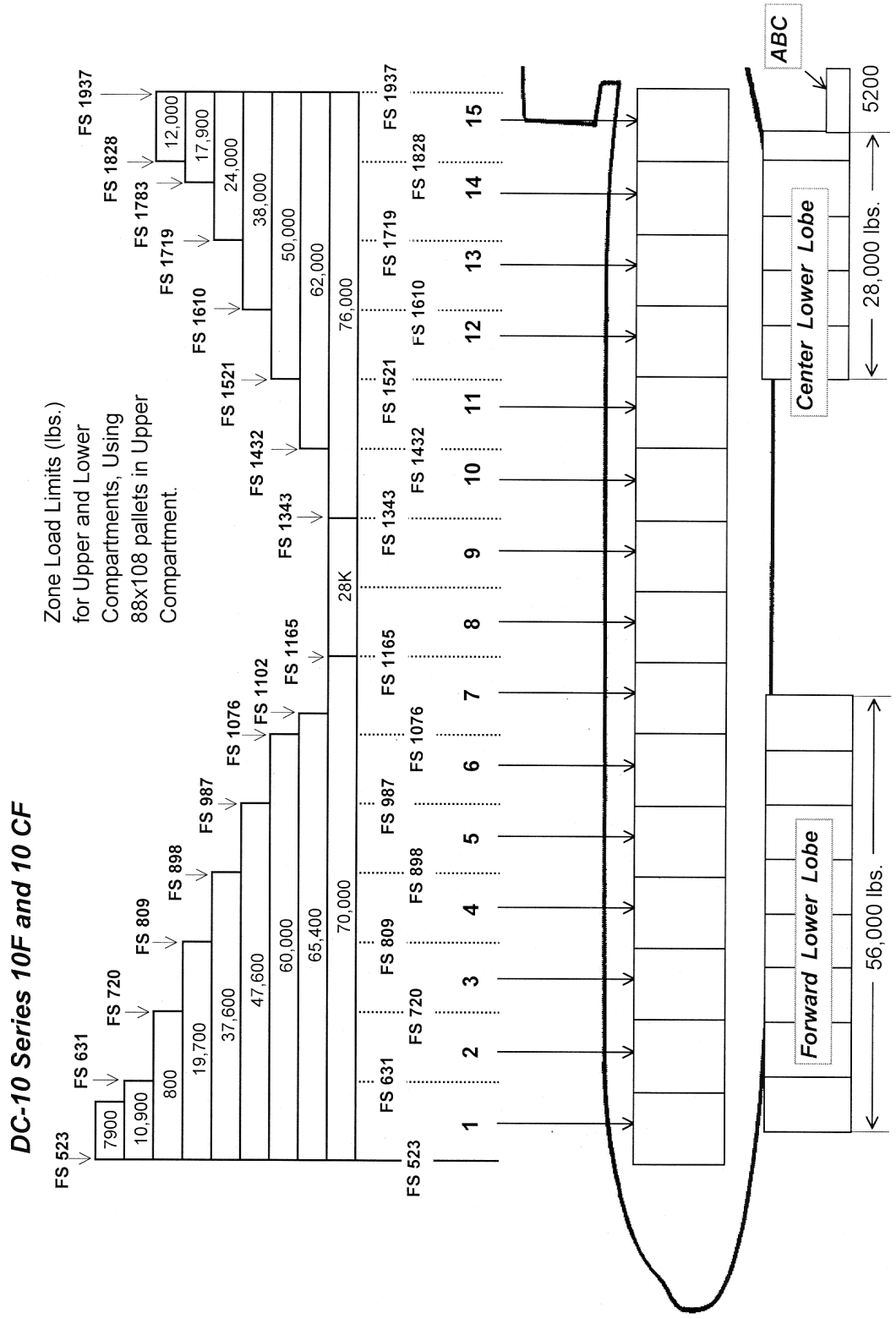


Figure 8. DC-10 (-10 series) Loading Capabilities and Loading Capabilities Chart.



Allowable Loads - 30 Pallet Configuration, -10 Series

Note that this page reflects information from prior page (Fig 6.8) only in tabular format.

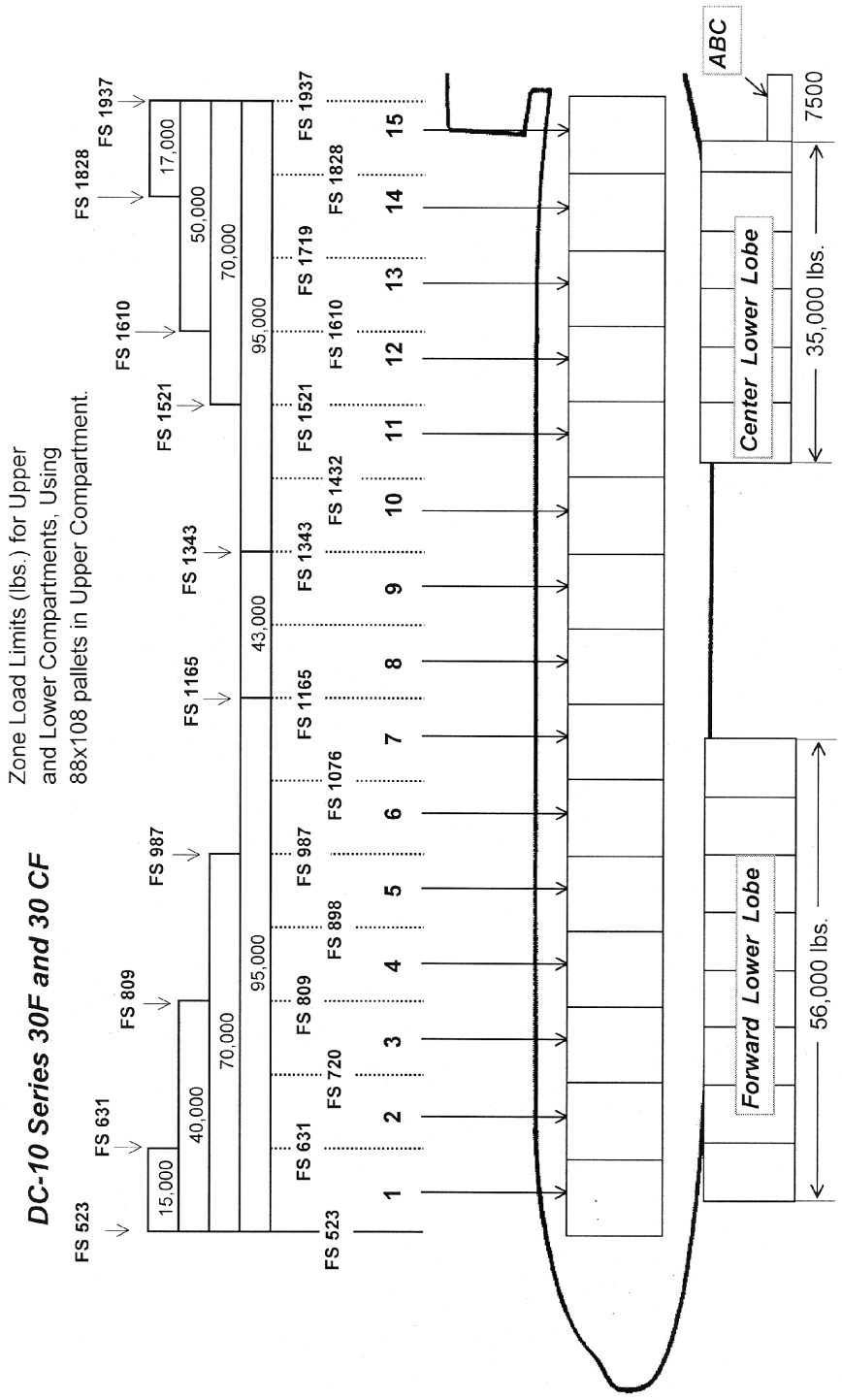
PALLET POSITION NO. (L and R)	COMPT PLACARDED [5] CAPACITY (LB)	LOADING SYS. WT (LB)	SHELL ZONE ALLOWABLE CAPACITY [4] (LB)
*	- -	- -	7,900 [1] *
1	10,900	390	10,900 [1]
2	8,900	591	19,800 [1]
3	8,900	473	28,700 [1]
4	8,900	196	37,600 [1]
5	8,900	179	47,600 [1]
6	8,900	180	60,000 [1]
*	- -	- -	65,400 [1] *
7	8,900	196	70,000 [1]
8	14,400	188	28,000 [2]
9	14,400	189	28,000 [2]
10	14,400	210	76,000 [3]
11	14,400	207	62,000 [3]
12	8,900	180	50,000 [3]
13	10,900	219	38,000 [3]
14	10,900	206	24,000 [3]
*	- -	- -	17,900 [3] *
15	10,900	197	12,000

NOTES:

1. Sum of the load in this compartment plus loads in compartments forward (main cabin plus lower cargo compartment) must not exceed shell zone allowable shown.
2. Sum of load in compartments 8 and 9 must not exceed shell zone allowable shown.
3. Sum of the load in this compartment plus loads in compartments aft (main cabin plus lower cargo compartment) must not exceed shell zone allowable shown.
4. Weight of galley, galley contents, other passenger items on board, pallets, and containers must be considered as payload for computing shell zone allowable capacity for comparison with this table.
5. Total weight of pallets, containers, and payload in each compartment must not exceed Compartment Placarded Capacity.

- Denotes partial compartment

Figure 9. DC-10 (-30 series) Loading Capabilities Chart.



DC-10 (-30 series) Loading Capabilities Chart.

Allowable Loads - 30 Pallet Configuration, -30 Series

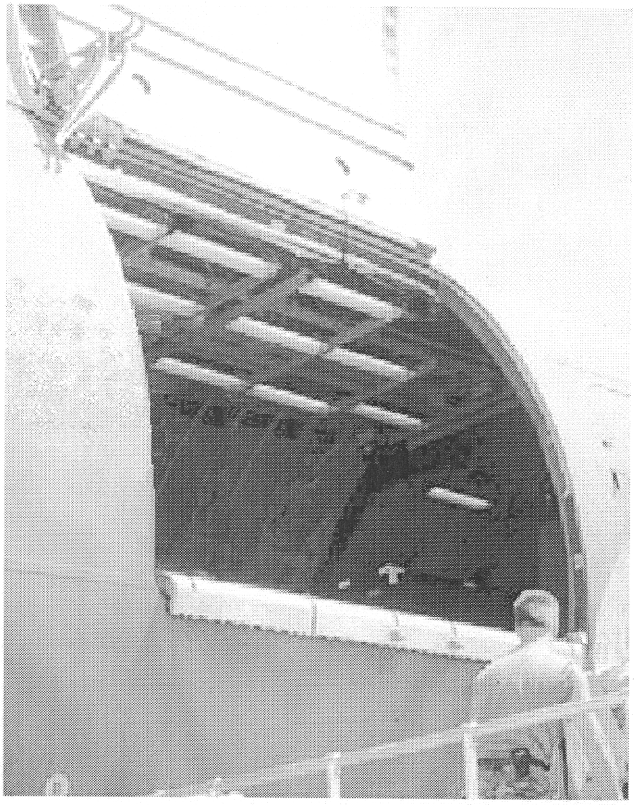
Note that this page reflects information from prior page (Fig 6.9) only in tabular format.

PALLET POSITION NO. (L and R)	COMPT PLACARDED [5] CAPACITY (LB)	LOADING SYS. WT (LB)	Upper Comp. PLI Limit (pound per linier inch)	Allowable Combined Upper & Lower Comp. Limit In Pounds	SHELL ZONE ALLOWABLE CAPACITY [4] (LB)
1	10,900	390	100	15,000	15,000 [1]
2	8,900	591	100	17,800	
3	8,900	473	100	17,800	40,000 [1]
4	8,900	196	100	17,800	
5	8,900	179	100	17,800	70,000 [1]
6	8,900	180	100	17,800	
7	10,700	196	120	13,300	95,000 [1]
8	21,500	188	242	21,500	43,000 [2]
9	21,500	189	242	21,500	43,000 [2]
10	21,500	210	242	21,500	95,000 [3]
11	21,500	207	242	21,500	
12	10,900	180	123	20,600	70,000 [3]
13	10,900	219	100	19,500	50,000 [3]
14	10,900	206	100	19,500	
15	10,900	197	100	17,000	17,000

NOTES:

1. **Sum of the load in this compartment plus loads in compartments forward (main cabin plus lower cargo compartment) must not exceed shell zone allowable shown.**
2. **Sum of load in compartments 8 and 9 must not exceed shell zone allowable shown.**
3. **Sum of the load in this compartment plus loads in compartments aft (main cabin plus lower cargo compartment) must not exceed shell zone allowable shown.**
4. **Weight of galley, galley contents, other passenger items on board, pallets, and containers must be considered as payload for computing shell zone allowable capacity for comparison with this table.**
5. **Total weight of pallets, containers, and payload in each compartment must not exceed Compartment Placarded Capacity.**

Figure 10. DC-10 F Side Door Dimensions and Cargo Restrictions.



Cargo door maximum height calculation:

Door Height	102”
(-)Roller Height	1-3/4”
(-)Pallet Height	2-1/4”
(-)Top Clearance	2”

Maximum Palletized Cargo Height: 96”

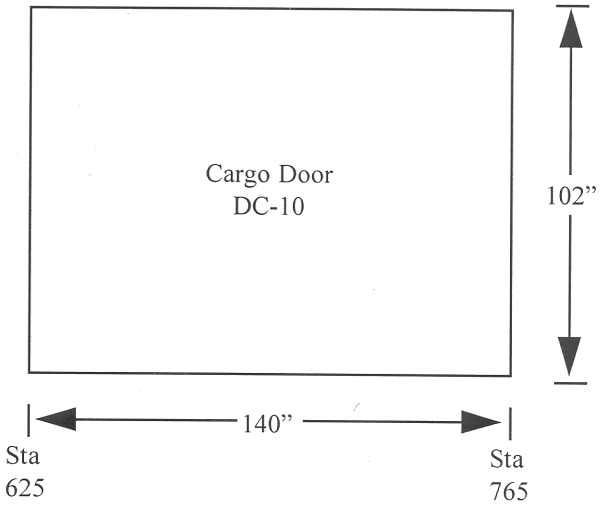
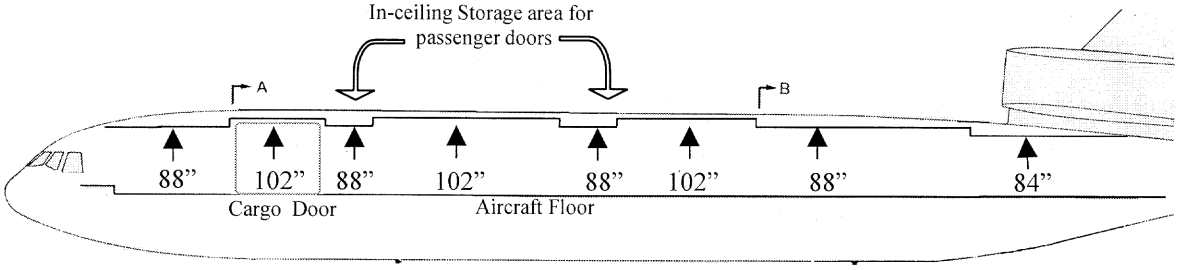


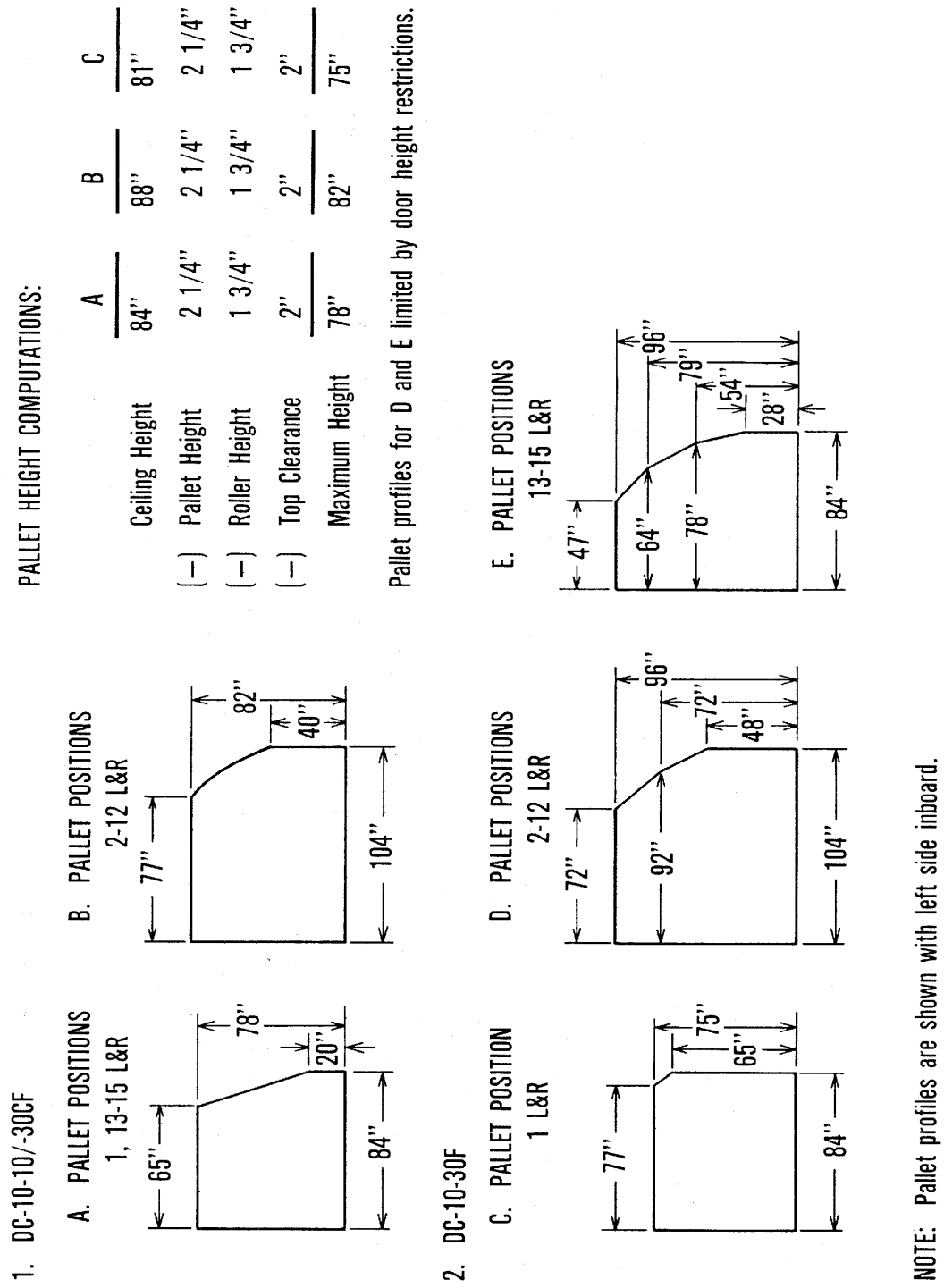
Figure 11. DC-10 Main Deck, Inside View with Passenger ceiling installed.

Figure 12. DC-10 Main Deck, Profile of Side View with passenger ceiling installed.



Note: The passenger celing kit can be removed to allow cargo with greater height. If this is the case the maximum height is 96 in. measured from the top of the floor rollers.

Figure 13. DC-10 Pallet Profiles.



13. DC-10 Lower Lobes. The following package charts can be used to determine whether a package can fit in any lower compartment based on the restrictions imposed by the cargo door and compartment size.

If the forward lower lobe door is not consistent with the following tables, then use the data based on the most restrictive parameter, either the door size or galley length.

NOTE: This is the maximum height only between Stations 624 and 774 (pallet positions 1 and 2). See figures 6.12 for additional height restrictions

Table 3. DC-10 Forward Cargo Door, Max Length Chart (pallet positions 1 and 2)

Package Height	Package Width (inches)										
(inches)	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**	**132**
12	340	329	324	317	310	300	278	283	275	252	228
24	340	329	324	317	310	300	278	283	275	252	228
36	340	329	324	317	310	305	278	283	275	250	226
48	330	328	323	316	310	305	278	283	274	248	224
60	326	321	316	310	305	300	284	285	261	239	218
72	318	312	307	305	300	297	288	264	244	226	211
84	308	303	297	293	285	285	263	243	227	213	202

Table 4. DC-10 Forward Cargo Door, Max Length Chart (pallet positions 3 through 15)

Package Height	Package Width (inches)										
(inches)	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**	**132**
12	1323	1000	730	578	478	402	350	311	280	252	229
24	1323	992	730	578	478	402	350	311	280	252	229
36	1323	982	725	572	472	400	349	308	277	250	228
48	1266	900	675	542	452	390	341	303	275	247	225
60	1066	750	582	482	410	359	318	284	261	242	221
72	800	610	500	425	366	326	288	261	243	224	204
84	620	500	420	370	325	285	256	241	227	202	184
96	490	420	370	325	285	260	235	210	185	170	145

NOTE: Maximum package charts for DC-10 side door for cargo pushed forward to pallet positions 1 and 2 Left and Right (**Table 3.**); All other pallet positions except 1 and 2, use **Table 4.** (Example: A package 60 inches high and 48 inches wide loaded toward the aft of the aircraft can be up to 482 inches long and fit into the cargo area). Longer vehicles can be loaded due to the variable shape, contact carrier for details.

Table 5. DC-10 Lower Lobes Maximum Loading Length Charts. FLL, Upper Deck Galley, 104" x 66" Door.

MAXIMUM LENGTH IN INCHES FOR HEIGHT AND WIDTH SHOWN																	
Package Height (inches)	Package Width (inches)																
	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
64	363	327	302	283	266	251	239	227	220	203	191	180	166	154	143	134	126
60	369	331	305	284	268	251	239	227	220	203	191	180	166	154	143	134	126
54	378	338	306	286	270	251	239	227	220	203	191	180	166	154	143	134	126
48	382	346	313	292	271	253	239	227	220	203	191	180	166	154	143	134	126
42	388	350	317	295	273	255	240	228	220	203	191	180	166	154	143	134	126
36	402	357	321	299	275	257	241	228	220	203	191	180	166	154	143	134	126
30	415	367	330	306	279	260	242	228	220	203	191	180	166	154	143	134	126
24	415	388	342	312	286	263	246	228	220	203	191	180	166	154	143	134	126
18	415	407	360	323	293	268	248	231	220	203	191	180	166	154	143	134	126
12	415	409	385	336	300	276	252	233	220	203	191	180	166	154	143	134	126
6	415	409	407	348	315	284	257	238	220	203	191	180	166	154	143	134	126

Table 6. DC-10 Lower Lobes Maximum Loading Length Charts. FLL, Lower Galley, 70" X 66" Door

Package Height	Package Width (inches)										
(inches)	6	12	18	24	30	36	42	48	54	60	66
64	246	241	233	216	205	197	184	171	156	142	130
60	246	241	235	218	206	197	184	171	156	142	130
54	246	241	235	218	207	197	184	171	156	142	130
48	246	241	236	220	207	197	184	171	156	142	130
42	246	241	238	221	207	197	184	171	156	142	130
36	246	241	238	222	207	197	184	171	156	142	130
30	246	241	237	224	207	197	184	171	156	142	130
24	246	241	237	225	207	197	184	171	156	142	130
18	246	241	237	231	211	198	184	171	156	142	130
12	246	241	237	233	217	198	184	171	156	142	130
6	246	241	237	233	224	204	186	171	156	142	130

Table 7. DC-10 Lower Lobes Maximum Loading Length Charts. CLL, 70”x66” Door.

Package Height	Package Width (inches)										
(inches)	6	12	18	24	30	36	42	48	54	60	66
64	266	251	233	216	205	197	184	171	156	142	130
60	268	252	235	218	206	197	184	171	156	142	130
54	274	254	235	218	207	197	184	171	156	142	130
48	277	254	236	220	207	197	184	171	156	142	130
42	280	258	238	221	207	197	184	171	156	142	130
36	283	259	238	222	207	197	184	171	156	142	130
24	283	275	248	225	207	197	184	171	156	142	130
18	283	279	255	231	211	198	184	171	156	142	130
12	283	279	273	240	217	198	184	171	156	142	130
6	283	279	274	252	224	204	186	171	156	142	130

Table 8. DC-10 Aft Bulk Compartment (ABC), 44”x48” Door.

Package Height	Package Width (inches)						
(inches)	6	12	18	24	30	36	42
48	167	164	158	148	140	132	123
42	175	175	165	153	145	133	123
36	180	176	167	153	147	134	123
30	183	177	168	155	148	136	124
24	185	178	169	155	148	137	125
18	186	179	169	155	148	138	125
12	188	180	170	156	149	138	125
6	190	180	170	158	150	139	126

Table 9. DC-10 Aft Bulk Compartment (ABC), 30”x36” Door.

Package Height	Package Width (inches)										
(inches)	**6**	**12**	**18**	**24**	**30**	**36**	**42**	**48**	**54**	**60**	**66**
64	--	--	--	--	--	--	--	--	--	--	--
60	113	112	--	--	--	--	--	--	--	--	--
54	113	113	--	--	--	--	--	--	--	--	--
48	128	122	117	117	107	103	101	100	97	93	93
42	142	135	126	126	120	118	118	118	120	109	98
30	142	136	131	127	122	120	120	120	120	109	98
24	143	138	131	128	122	121	121	121	120	109	98
18	144	138	132	129	123	122	122	122	120	109	98
12	144	138	133	130	124	122	122	122	120	109	98
6	144	138	133	131	125	123	123	123	120	109	98

ROGER A. BRADY, Maj Gen
Director of Operations

ATTACHMENT 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Abbreviations and Acronyms

ABC—aft. bulk compartment

ACL—Allowable Cargo/Cabin Load

AESS—Aeromedical Evacuation Ship Set

AFB—Air Force Base

AFR—Air Force Regulation

AGL—Above Ground Level

TALCE—Tanker Airlift Control Element

ALCS—Airlift Control Squadron

ALS—Airlift Squadron

AMC—Air Mobility Command

AMCOS—Air Mobility Combat Operations Staff

AMCP—Air Mobility Command pamphlet

AMCR—Air Mobility Command regulation

APC—Armored Personnel Carrier

APS—Aerial Port Squadron

ASD—Aeronautical Systems Division

ATA—Air Transport Association

AW—Airlift Wing

BL—Butt Line

CB—Center of balance (or center of gravity)

CCE—Commercial Construction Equipment

CF/F—Convertible Freighter Or Freighter

CFR—Code of Federal Regulations

CG—Center Of Gravity (Or Center Of Balance)

CIV—Civilian/Civil

CL—Center Line

CLL—Center Lower Lobe

COMBI—Combination

COMM—Commercial

CONF—Configuration

CRAF—Civil Reserve Air Fleet

CU FT—Cubic Feet

DDT—Double Dual Tandem Type Landing Gear (B-747 etc.)

DIST—Distance

DOD—Department of Defense

EST.—Estimate

ELEV—Elevator

FAA—Federal Aviation Administration

FAR—Federal Aviation regulation

FLL—Forward Lower Lobe

FS—Flight Station Or Fuselage Station

GACL—Guaranteed Allowable Cabin (Or Cargo) Load

HGT—Height

HQ—Headquarters

IATA—International Air Transport Association

IN.—Inches

JSCP—Joint Strategic Capabilities Plan

LAT.—Laterally

LBL—Left Butt Line

LCN—Load Classification Number

LONG—Longitude

LOX—Liquid Oxygen

LOSS—Liquid Oxygen Subsystem

MAC—Mean Aerodynamic Chord

MAX—Maximum

MHE—Material Handling Equipment

MIL—Military

MOS—Medical Oxygen Subsystem

MSU—Multi-Servicing Unit

MTMC—Military Traffic Management Command

MTOW—Maximum Take Off Weight

MLW—Maximum Landing Weight

MZFW—Maximum Zero Fuel Weight

N/A—Not Applicable

NM—Nautical Mile (Statute Mile X 1.15)

OEW—Operating Empty Weight

OL—Operation Location

PAX—Passenger

PDO—Publications Distribution Office

PLF—Pounds Per Linear Foot

PLI—Pounds Per Linear Inch

PLS—Patient Loading System

PP—Pallet Position

PSF—Pounds Per Square Foot

PSI—Pounds Per Square Inch

RBL—Right Butt Line

RWY—Runway

SBTT—Single-Belly Twin Tandem Landing Gear (DC-10, KC-10 etc.)

S/T—Short Ton (2,000 lbs.)

SPR—Single Point Refueling

STN—Station

TACC—Tanker Airlift Control Center

TAW—Tactical Airlift Wing

TO—Technical Order

T/O—Takeoff

TT—Twin Tandem (DC-8, B757, B767)

UKN—Unknown

WDT—Width

WBEL—Wide Body Elevator Loader

WL—Water Line

WRSK—War Readiness Spares Kit

WT—Weight

ZFW—Zero Fuel Weight

ATTACHMENT 2

INTERNATIONAL CARGO AND PASSENGER PLANNING FACTORS

Table A2.1. CRAF LONG-RANGE INTERNATIONAL CARGO PLANNING FACTORS

Aircraft Type	Maximum ACL (s/t)	Pallets	Range with Maximum ACL (nautical mi)	Maximum ACL (s/t) per Leg Length (nautical mile)				Ferry Range No Cargo (nautical mi)
				2,000	2,500	3,000	3,500	
A300-600F	56.6	15	1,800	54	52.5	46	40	4,450
B-757-200F	43	13	3,600	43	43	43	43	4,850
B-767-300F	65.9	26	3,500	65.9	65	65.9	65.9	7,150
DC-8-55F	43.8	13	2,400	43.8	42.5	37	31.5	4,700
DC-8-62F	44	14	3,500	44	44	44	44	5,600
DC-8-62 Combi	36	10	3,450	36	36	36	35.5	5,700
DC-8-63F	55	18	2,250	55	52.3	47.5	42.8	4,600
DC-8-71F	48.5	18	2,300	48.5	45	38.5	32.3	4,700
DC-8-73F	54.3	18	2,500	54.3	54.3	50.3	43.5	4,800
B-747-100F	106.5	33	3,200	106.5	106.3	106.5	99.8	6,800
B-747-200F	120	33	3,200	120	120	120	112	7,900
B-747-300F	116	33	3,100	116	116	116	113.5	7,900
B-747-400F	129.7	33	3,800	129.7	129.7	129.7	129.7	8,650
DC/MD-10-10F	69.3	30	2,000	69.3	61.25	54.6	46.7	4,200
DC-10-30CF	71.8	30	3,000	71.8	71.8	71.8	69.5	6,700
DC/MD-10-30F	83.1	30	3,600	83.1	83.1	83.1	83.1	6,700
MD-11CF	89	35	4,500	89	89	89	89	7,800
MD-11F	96	35	3,750	96	96	96	96	7,800
L-1011-200F	63	26	2,600	63	63	55.5	48.5	3,750

NOTE: **Ferry Range is distance the aircraft can fly with no cargo**

Table A2.2. CRAF LONG-RANGE INTERNATIONAL PASSENGER PLANNING FACTORS

Aircraft Type	Maximum Seats (Troops)	Range with Maximum Troops (NM)	Maximum Troops per Leg Length (NM)				Ferry Range No Troops (NM)
			2,000	2,500	3,000	3,500	
A-300-600ER	138	3,200	138	138	138	120	4,260
B-757-200	127	2,300	127	120	103	85	4,400
B-757-200ER	131	3,175	131	131	131	116	4,700
B-757-300ER	166	2,700	166	166	150	126	4,400
DC-10-10	222	2,300	222	201	150	100	4,000
DC-10-30	235	3,900	235	235	235	235	5,800
DC-10-40	222	2,750	222	222	203	160	4,875
DC-10-40J	219	3,200	219	219	219	195	4,856
MD-11	233	5,000	233	233	233	233	6,800
MD-11ER	338	4,500	338	338	338	338	6,800
B-747-100	394	2,900	394	394	365	313	6,600
B-747-200	365	3,800	365	365	365	365	7,600
B-747-400	295	6,250	295	295	295	295	8,650
B-767-200	149	2,450	149	145	120	98	7,500
B-767-200ER	161	3,650	161	161	161	161	7,700
B-767-300	186	3,375	186	186	186	167	6,800
B-767-300ER	213	3,500	213	213	213	213	7,200
B-767-400ER	232	3,500	232	232	232	232	6,500
B-777-200	250	4,200	250	250	250	250	9,200
B-777-200ER	263	5,515	263	263	263	263	9,500
L-1011-50	225	2,300	225	215	183	140	4,000
L-1011-100/150	230	2,900	230	230	220	174	4,400
L-1011-500	223	4,100	223	223	223	223	6,000

NOTE: **Troop weights are calculated at 400 pounds each, which includes personal equipment and field gear for combat operations.**